

CLAIMS

1. Active charcoal, characterized by:
  - o a total pore volume of greater than or equal to 1.00 ml/g, preferably of greater than or equal  
5 to 1.20 ml/g,
  - o a bed strength (BS), measured according to a bulk crushing test from Shell, of greater than or equal to 1 MPa (10 bar) and preferably of greater than or equal to 1.5 MPa (15 bar) and advantageously of  
10 greater than or equal to 1.7 MPa (17 bar), and
  - o a BET specific surface of greater than or equal to 500 m<sup>2</sup>/g, preferably of greater than or equal to 700 m<sup>2</sup>/g.
2. Active charcoal according to Claim 1,  
15 characterized in that it exhibits:
  - o a micropore volume, measured by nitrogen adsorption, of greater than or equal to 0.20 ml/g, preferably of greater than or equal to 0.30 ml/g.
  - o a mesopore volume, measured by nitrogen  
20 adsorption and mercury intrusion, of greater than or equal to 0.15 ml/g, preferably of greater than or equal to 0.20 ml/g, and
  - o a macropore volume, measured by mercury intrusion, of greater than or equal to 0.40 ml/g,  
25 preferably of greater than or equal to 0.50 ml/g.
3. Active charcoal according to Claim 1 or 2, characterized in that its iron content by weight is

less than or equal to 2000 ppm, preferably less than or equal to 1000 ppm, advantageously less than or equal to 500 ppm and more advantageously still less than or equal to 300 ppm.

5           4.   Active charcoal according to any one of Claims 1 to 3, characterized in that its bulk density is between 0.20 and 0.50, preferably between 0.3 and 0.4.

10           5.   Active charcoal according to any one of Claims 1 to 4, characterized in that its ash content is less than or equal to 10%, preferably less than or equal to 7%, of the total weight of the active charcoal.

15           6.   Active charcoal according to any one of Claims 1 to 5, characterized in that its particle size is such that the charcoal particles are retained by a sieve with a mesh size of 0.2 mm, preferably 0.4 mm and advantageously 0.6 mm, and pass through a sieve with a mesh size of 5 mm, preferably 2 mm, and are provided in  
20 the form of strands, preferably in the form of granules or beads.

7.   Active charcoal according to any one of Claims 1 to 5, characterized in that it is based on fruit stones, preferably based on olive marc.

25           8.   Process for the impregnation of active charcoal as defined in any one of Claims 1 to 7:

a) with an aqueous solution of a metal

complex chosen from cobalt, nickel, copper, zinc and vanadium phthalocyanines, metal complexes of polyaminoalkylpolycarboxylic acid, such as complexes of EDTA or of one of its salts, preferably cobalt  
5 phthalocyanine, and optionally one or more promoting or doping additives, and

b) by impregnation with a basic solution, for example based on sodium hydroxide, potassium hydroxide or ammonia.

10 9. Catalyst for the oxidation of mercaptans to disulphides, characterized in that it is composed of at least one metal complex, such as a cobalt, nickel, copper, zinc or vanadium phthalocyanine, preferably cobalt phthalocyanine, or one metal complex of  
15 polyaminoalkylpolycarboxylic acid attached to an active charcoal as defined in any one of Claims 1 to 7.

10. Catalyst for the oxidation of mercaptans according to Claim 9, characterized in that it is capable of being obtained according to the impregnation  
20 process of Claim 8, it being understood that the impregnation stage b) can take place during the reaction for the oxidation of the mercaptans.

11. Use of an active charcoal as defined in any one of Claims 1 to 7 as catalyst support, in  
25 particular for the oxidation of cyanide present in water or the synthesis of glyphosate.

12. Use of an active charcoal as defined in

any one of Claims 1 to 7 as catalyst.

13. Use of an active charcoal as defined in  
any one of Claims 1 to 7 in processes for purification  
and/or separation by selective adsorption in a liquid  
5 phase and/or in a gas phase (decolouration of liquid  
foodstuffs, water treatment, air treatment, recovery of  
solvents, and the like).